PROJECT REPORT
FINDING POLYNOMIAL ROOTS USING GENETIC ALGORITHM

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APPROVAL AND RATIFICATION PAGE

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Finding Polynomial Roots Using Genetic Algorithm

by

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ii

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iii

ABSTRACT

Polynomial is an expression of more than two algebraic terms, especially the sum of several terms that contain different powers of the same variable. Polynomial can be solved manually if the degree is between 1-3. For bigger degree, polynomial can not be solved manually and have to use some methods to solve it.

This project will use an algorithm to solve polynomial with degree above 3. Algorithm used in this program is Genetic Algorithm. This project will make the program using Java Programming language.

The result of this program is to find all the roots of polynomial using Genetic Algorithm.

***Keywords**: Polynomial, Genetic Algorithm, Java*

PREFACE

Polynomial is an expression of more than two algebraic terms, especially the sum of several terms that contain different powers of the same variable. Polynomial can be solved manually if the degree of polynomial is between 1-3. For bigger degree, it is difficult to solve it using manual method because numbers will become complex and can be really small (below 1). Program have to use algorithm to solve polynomial with degree above 3. Algorithm used in this program is Genetic Algorithm.

The background, scope and purpose of this project will be explained in Chapter 1. The literature study will be explained in Chapter 2. Planning for this program will be explained in Chapter 3. In Chapter 4, it will explain the design and flow of the program using use case and flowchart. In Chapter 5, it will explain the finished program and testing of the program. The conclusion and futher research of this project will be explained in Chapter 6.

TABLE OF CONTENT

TABLE OF FIGURES